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|--|---------------------------------|----|-----------------------|--------|---------------|-------------|-----------------------|
|  | Yes                             | No | Enc.                  | Follow | Please obtain | Enc.        | Not available         |
| 1. "Desk Top TV program Creation-TVML (TV program Making Language) Editor-", Ueda et al., Association for Computing Machinery, September 1998  | <input type="radio"/>           |    | <input type="radio"/> |        |               |             | <input type="radio"/> |
| 2. "A TV program generating/ interactive editing system based on TVML (TV program Making Language)" Toshiaki Yokoyama et al., The 3 <sup>rd</sup> Intelligent Information Media Symposium, December 1997 | <input type="radio"/>           |    | <input type="radio"/> |        |               |             | <input type="radio"/> |
| 3. "Man-Machine Interface for TV program Making Language (TVML)", Toshiaki Yokoyama et al., The Institute of Electronics, Information and Communication Engineers Society Conference, September 1997     | <input type="radio"/>           |    | <input type="radio"/> |        |               |             | <input type="radio"/> |
| 4. "TV program Making Language for making personal TV program on a desktop", Masaki Hayashi, Broadcasting Technique, January 1999, pp.139-144  | <input type="radio"/>           |    | <input type="radio"/> |        |               |             | <input type="radio"/> |
| 5.   |                                 |    |                       |        |               |             |                       |

# Desk Top TV Program Creation - TVML (TV program Making Language) Editor -

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## INTRODUCTION

We proposed the script description language TVML (TV program Making Language). Contents of TV programs are represented by text-based commands such as "Title#1" or "ZoomIn". A TVML player interprets the script written in TVML and then generates a TV program in real time. The TVML player uses real-time computer graphic (CG) characters, a voice synthesizer, and multimedia computing techniques. A prototype was demonstrated at MULTIMEDIA97. We improved the script specification and newly developed the TVML editor based on the last year results. This system provides an intuitive visual interface for the creation of TV programs on a desktop workspace and generates.

## TVML Editor

The TVML editor software is implemented in a SGI graphic workstation. The TVML editor includes the TVML player in it for the preview function. Figure 1 shows a typical screen of the TVML editor. The output of this editor is a TVML script. This is a metaphor of a sheet of paper that is commonly used to design a TV program by TV production people. The vertical axis is a time. There are four columns and they covers the following items.

- (a) Studio shot using CG characters with synthesized voice, CG studio set and CG camerawork.
- (b) Movie file playing
- (c) Title using HTML-like text layout
- (d) Superimposing
- (e) Sound file playing as background music
- (f) Narration by synthesized voice

Item (a) and (b) are alternately put on the most left column. Item (c) and (d) are alternately put in the second column. Item (e) and (f) are individually put in the following columns. Each of items are clickable and when clicked an operation window is open as shown in Figure 2. The operation windows are designed suitable for each characteristics of items. Therefore using these operation windows a user can manage the detail of above items by intuitive and easy visual methods.

For instance, CG character's position are adjusted by a mouse or a dial box. A CG character's action is chosen by a pop-up menu. A speech text is typed in a text box of the operation window. A camera work is chosen by a ready-made pop-up selection or adjusted by a mouse if a user wants more precise positioning. The system provides a real-time reaction for all users operations by driving the TVML player in it. Consequently TV program creation is so enjoyable.

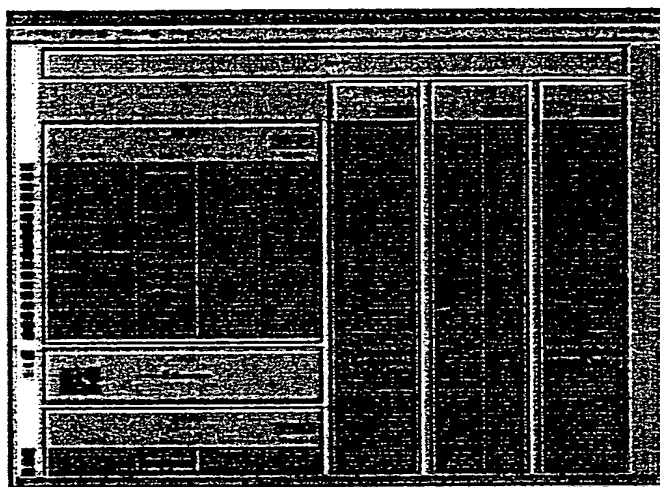


Figure 1. Basic screen example

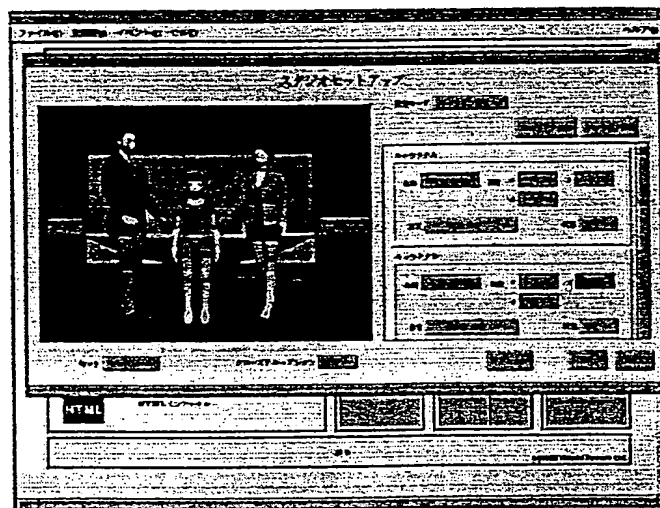


Figure 2. Operation window for CG characters